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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/992,200	11/14/2001	Benjamin J. Bekritsky	1241	5722

21003 7590 12/02/2004

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EXAMINER

ISSING, GREGORY C

ART UNIT PAPER NUMBER

3662

DATE MAILED: 12/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/992,200

Applicant(s)

BEKRITSKY ET AL. 

Examiner

Gregory C. Issing

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>5/03, 9/02, 3/02</u> . | 6) <input type="checkbox"/> Other: ____. |

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1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

2. Claims 1-17 are rejected under 35 U.S.C. 102(b) as being anticipated by Sanderford et al.

3. Sanderford et al disclose the claimed method and system for synchronizing reference stations 102 so as to provide accurate clocks in the multilateration of position of an unknown transmitter 103. A correction matrix is used to enhance the estimation of position by determining correction factors using a reference transmitter 104/105 of known position wherein the reference transmitter transmits a data packet to the plurality of reference stations 103 having local clocks for determining a time of arrival. The time of arrival data from the respective reference stations are forwarded to a central processing station 100 which correlates the TOA data from the respective stations to compute the correction factors, since the calculated measurements/position can be compared to the known values on account of the known positions of the transmitter and the receiving stations. Further correction values can be determined using a linear interpolation of values

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between sets of correction values when compensating for offsets of mobile stations whose positions are to be determined (col. 15).

4. Claims 1-17 are rejected under 35 U.S.C. 102(e) as being anticipated by Stilp.

5. Stilp discloses the claimed method and system for synchronizing receiving stations of a radiolocation system. The wireless location processing is set forth in col. 13 and 14 wherein a mobile device (Wireless transmitter) transmits a data packet which is received at a plurality of receiving stations (SCS 10A-C). Time of arrival data is determined and forwarded to a central processing station 12 that compensates for errors and determines location using multilateration processing. An external calibration method, which includes the compensation for differing clocks at the receiving stations, is set forth in col. 21-24, wherein compensation, i.e. error values, are derived using a filtered, weighted average wherein the filtering may be performed by a Kalman filter. The filtered, weighted average using a Kalman filter meets the scope of the claimed linear polynomial in light of the fact that a Kalman filter may take the form of either a linear or non-linear equation.

6. Claims 7-9 are rejected under 35 U.S.C. 102(b) as being anticipated by Heller.

7. Heller (5,119,104) discloses a radio-location system to track and locate a plurality of objects 30 including a plurality of receiving stations 20 and one or more calibration beacons 35, each of the receiving stations and calibration beacons having a known position. The calibration procedure utilizing the calibration transmitters 35 is described in section 1.5 in col. 10-11. System synchronization is achieved using a processor clock signal that is forwarded over an LAN to each of the receiving stations. However, the radiolocation system is readily adaptable to other schemes for providing a system synchronization clock for deriving an appropriate receiver time base for the desired location resolution (col. 7, lines 43-52). Position location processing is described in section 1.4, in col. 9-10, wherein TOA detection packets are forwarded from each receiver to the processor which utilizes the TOA packets and the calculated calibration coefficients to correct the TOA which

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is used in time difference of arrival processing. Heller recognizes that a stable synchronized time base is required.

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

9. Doles et al (US 2001/0030625) disclose a similar radiolocation system to Heller including local clocks in each receiver station which are required to be continuously synchronized with each other in order to properly utilize DTOA information. A location processor maintains a reader clock calibration database which stores offsets for each reader clock that is employed by the processor to correct for any drifts or offsets in the various reader clocks locally installed at each of the receiving stations [0020-0021] and which are coupled to the processor over a wireless network. The offsets are determined during a calibration stage using a reference transmitter of known location which communicates a data packet to each of the receiving stations.

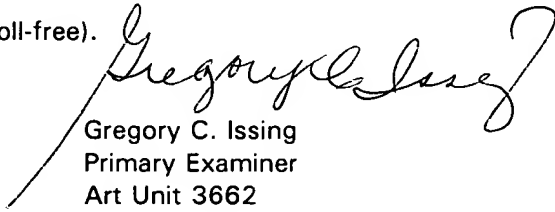
10. Anderson et al (5,469,409) disclose a clock calibration method for use in a radiolocation system wherein a reference transmitter 10 transmits a packet which is received at each of a plurality of receiving stations (AP-Nodes) which are forwarded to collector nodes (C-Node) each of which has its own local clock. The central computer 15 provides synchronization between the plurality of collector nodes using the known locations of the reference transmitter, AP-nodes and C-nodes as well as the line delays between each of the nodes and the central computer.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gregory C. Issing whose telephone number is 703-306-4156. The examiner can normally be reached on Monday - Thursday 6:00 AM- 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Tarcza can be reached on 703-306-4171. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Gregory C. Issing
Primary Examiner
Art Unit 3662

gci